FE344

Diagram No. 8252-3

NOAA FORM 76-35A

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE

DESCRIPTIVE REPORT

FE344

Type of Survey Hydrographic

Field No. RA-5-1-90

Registery No. FE-344

LOCALITY

State Alaska

General Locality Sitka

Sublocality Rocky Patch and Entrance to Sealing Cove

1990

CHIEF OF PARTY
CAPT J.C. Albright

LIBRARY & ARCHIVES

DATE February 4, 1991

☆U.S. GOV. PRINTING OFFICE: 1985—566-054

AHG/EJ 4-491
17330 - AHG 9-11-92 KO
17330 - N/C AT AHG'S REQUEST 9-11-92 KO
17330 - AHG 9-11-92 KO

NOAA FORM 77-28 (11-72)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

REGISTER NO.

FE-344

HYDROGRAPHIC TITLE SHEET

INSTRUCTIONS - The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

FIELD NO.

RA-5-1-90

State Alaska

General locality Sitka

Locality Rocky Patch and Entrance to Sealing Cove

Scale 1:5,000 Date of survey May 23-24, 1990

Instructions dated February 22, 1990 Project No. OPR-0186-RA

Vessel Launches (2123), (2125)

Chief of party CAPT J.C. Albright

Surveyed by LT D. Cole, LTJG G. Glang, ENS H. Muench, ENS C. Ward

Soundings taken by echo sounder, ~~hand lead pole~~ DSF 6000N; Pneumatic depth gage

Graphic record scaled by RAINIER Personnel

Graphic record checked by RAINIER Personnel

Verification by: ~~Protracted by~~ B. Brown Automated plot by PHS Xynetics Plotter

Evaluation by: ~~Verified by~~ C.R. Davies

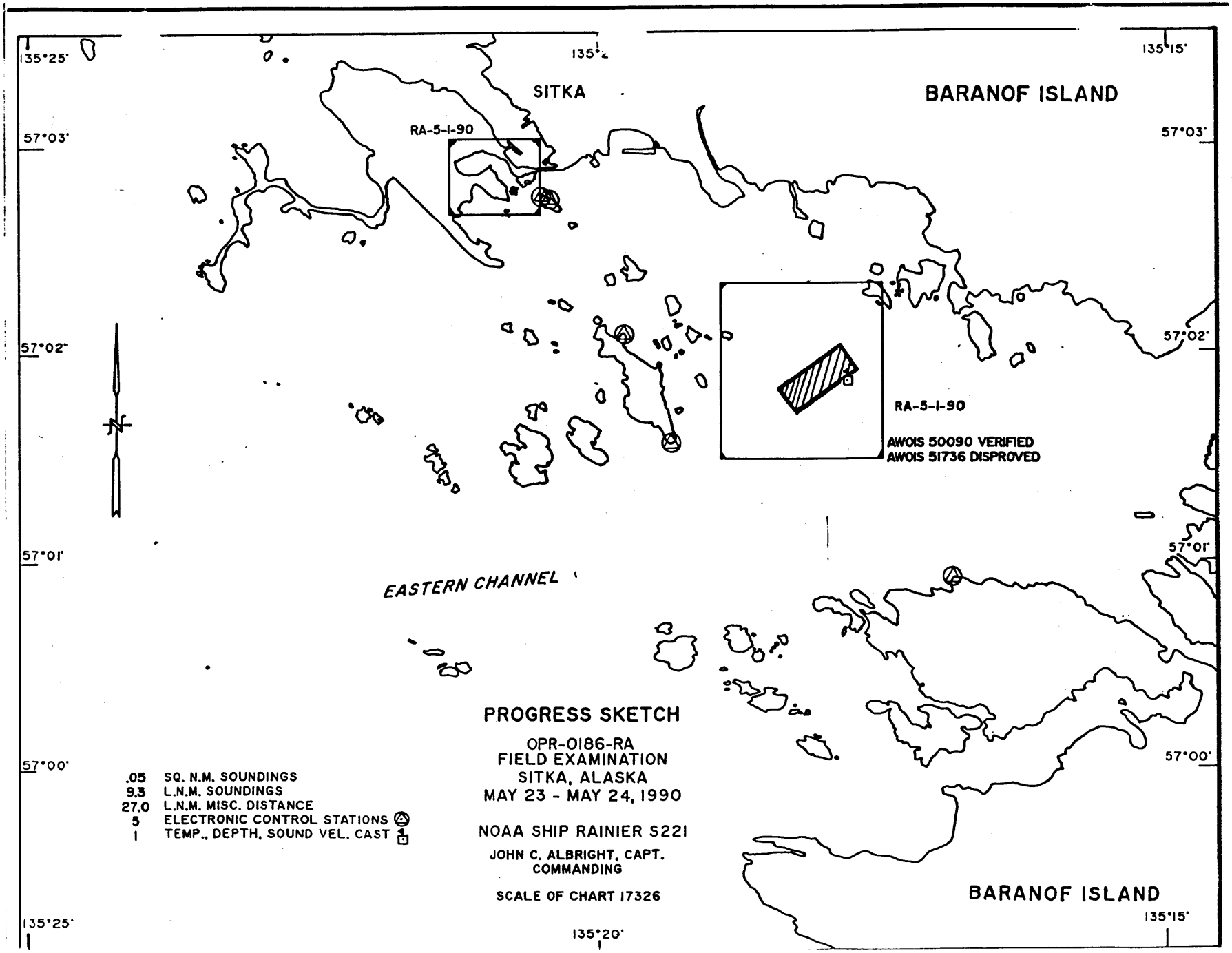
Soundings in ~~fathoms~~ meters ~~feet~~ at ~~MLW~~ MLLW ~~MLLW~~ and decimeters

REMARKS: Time in UTC. Revisions and marginal notes in black were generated during office processing. All separates are filed with the hydrographic data, as a result page numbering may be interrupted or non-sequential.

AWOLS + SURF CHK 3/8/91, MCR

KWW 2-22-91

U.S. GOVERNMENT PRINTING OFFICE: 1986 - 652-007/41215


135°25'
135°20'
135°15'
57°03'
57°02'
57°01'
57°00'
SITKA
BARANOF ISLAND
RA-5-1-90
RA-5-1-90
AWOIS 50090 VERIFIED
AWOIS 51736 DISPROVED
EASTERN CHANNEL
.05 SQ. N.M. SOUNDINGS
9.3 L.N.M. SOUNDINGS
27.0 L.N.M. MISC. DISTANCE
5 ELECTRONIC CONTROL STATIONS
1 TEMP., DEPTH, SOUND VEL. CAST
PROGRESS SKETCH
OPR-0186-RA
FIELD EXAMINATION
SITKA, ALASKA
MAY 23 - MAY 24, 1990
NOAA SHIP RAINIER S221
JOHN C. ALBRIGHT, CAPT.
COMMANDING
SCALE OF CHART 17326
BARANOF ISLAND

Descriptive Report to Accompany Field Examination FE-344

Field Number RA-5-1-90
Scale 1:5,000
May 1990

NOAA Ship RAINIER
Chief of Party: Captain John C. Albright

A. PROJECT ✓

A field examination was conducted in Sitka, Alaska to resolve two AWOIS Items (50090 and 51736), as specified by Project Instructions OPR-O186-RA, dated February 22, 1990.

This survey was requested by the Southeast Alaska Pilots' Association to investigate debris along pier ruins. Shoaling reported by a merchant vessel in the approaches to Sitka Harbor was also investigated. This will supplement a survey (FE-298) conducted in 1987 by RAINIER.

This survey was completed using procedures outlined in the January 1989 edition of the Field Procedures Manual for Hydrographic Surveying.

B. AREA SURVEYED See Final Report, section 1

The survey is located in Sitka, Alaska, along the northern side of Rocky Patch and the entrance to Sealing Cove Marina. The survey area around Rocky Patch is defined by an axis extending SW-NE from 57°01'~~49.7~~49.5"N, 135°18'~~23.4~~18.8"W to 57°01'~~57.2~~57.02"N, 135°17'54.~~9~~"W (NAD 83) and extending 100 meters on either side. The area in the entrance to Sealing Cove Marina is bound by latitudes 57°02'50"N to the north and 57°02'46"N to the south, by Alice Island to the west, longitude 135°20'40"W to the east, and Harbor Island to the northeast.

Data acquisition was conducted on May 23 and May 24, 1990 (DN 143 - DN 144).

C. SOUNDING VESSELS ✓

All data were acquired from the automated survey launches aboard NOAA Ship RAINIER shown below:

Vessel	EDP No.	Operation
RA-3	2123	Dive Operations
RA-5	2125	Hydrography, AML Cast

No changes to the standard sounding configurations were necessary.

D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDINGS ✓

RAINIER and all survey launches were equipped with the Raytheon DSF-6000N echo sounders shown below. The echo sounders were operated in the HIGH + LOW (HIGH DIGITIZED) function, using manual gain controls on both high and low frequencies to obtain the best analog trace. Soundings were recorded in meters and tenths of meters. Two-meter bar checks were conducted and recorded daily, using both the LOW and the HIGH + LOW (HIGH DIGITIZED) functions. The echo sounders were operated in accordance with the Provisional Instructions "Raytheon DSF-6000N Echo-Sounder Operating and Processing Instructions," dated July 5, 1983, and the N/CG2 memorandum "DSF-6000N Depth Errors as a Function of Receiver Gain," dated May 23, 1986.

Raytheon DSF-6000N Echo Sounders

Vessel	Serial No.	DN(1990)
2123	B046N	143-144
2125	A117N	143
	A119N	143-144
	A114N	144

The echo sounders were continuously monitored during data acquisition. All sounding data were scanned at least two times, not only to ensure all significant peaks and deeps were inserted, but also to verify the digitized depths. While running over steep or irregular areas, the echo sounders sometimes failed to track properly. Running at minimum speeds usually alleviated this problem, but marginal analog traces could not always be avoided. Data was analyzed during office processing and found to contain no significant errors.

Diver-obtained least depths were determined with a 3D Instruments pneumatic depth gage (S/N 8504192N). The gage was operated in accordance with Hydrographic Survey Guideline #55, and was calibrated February 7, 1990, by the Pacific Operations Group (N/OMA1214). In addition, field system checks were performed each day the pneumatic gage was used. Calibration correctors were applied to each depth determined with the pneumatic depth gage. Copies of the calibration results, correctors, and field systems checks are appended to this report. Filed with the hydrographic data

Corrections to Echo Soundings ✓

Corrections to echo soundings were determined for static draft, heave, velocity of sound through water, settlement and squat, and predicted tides. All correctors were applied to the final field sheets. Sounding correctors apply to both narrow and wide beams of the DSF-6000N echo sounder. Supporting data and computations for all corrections to echo soundings, except heave, are appended to this report. Filed with the hydrographic data

Static Draft ✓

For all launches, the distance from the transducer face to the gunwale was measured with a large metal carpenter-square. Static draft measurements were then determined by dropping a leadline from the gunwale to the waterline and subtracting this distance from the distance measured with the carpenter-square. The measurements from the gunwale to the waterline were conducted with the fuel tanks averaging 3/4 full and three people aboard. A transducer depth of 0.6 meter

was determined for all launches on March 20, 1990. This transducer depth agrees with the launches' historical records.

Heave ✓

Corrections for heave were applied while scanning echograms. The scanning technique used in comparing the analog trace with the digital record eliminated fluctuations greater than 0.4 meter resulting from sea action.

Sound Velocity ✓

Correctors for the velocity of sound through water were determined from the cast listed below:

Cast No.	Deepest Depth (m)	DN	Geographic Position
1	54	144	57°01'56"N, 135°17'50"W

Sound velocity correctors were acquired with an AML SVP Profiler, S/N 3042, which was calibrated at the Northwest Regional Calibration Center (NRCC) on March 27, 1990.

Velocity correctors were computed at increments in accordance with Hydrographic Survey Guideline 69, dated November 15, 1989, using the PC program VELOCITY (ver 1.11). The results are listed in Velocity Table 1 and are applicable to the entire field examination. An HDAPS listing of the velocity table is appended to this report. *

Settlement and Squat ✓

Settlement and squat correctors were determined for Vesno. 2125 on May 20, 1990, at the Icy Strait working grounds. The test was conducted over a hard bottom in depths well exceeding seven times the vessel's draft. Both sea and wind were calm. Observations were made through a Zeiss Ni2 leveling instrument (S/N 87102) to a rod held vertically on deck, directly over the transducer.

Ten level readings were made at each speed tested, and the average taken, to compute the correctors. Tide staff readings were taken concurrently with each set of level readings, and all tidal height differences were normalized to the tidal height of the dead-in-the-water level readings before the correctors were computed.

Offset Table 5 contains the settlement and squat correctors used for this field examination and is attached to this report. *

Tide Correctors ✓

Daily predictions for the Sitka, Alaska, reference tide station (945-1600) were applied directly for both heights and times to all data acquired during this field examination. The tide observer for Sitka, Alaska, was contacted prior to beginning field operations to ensure that the gage was operating properly. The tide records for Sitka, Alaska, can be obtained through Pacific Operations Group (N/OMA1214). An HDAPS listing of the tide corrector table is appended to this report. *

* Filed with the hydrographic data

E. HYDROGRAPHIC SHEETS ✓

All field sheets were prepared aboard RAINIER, on an automated Bruning Zeta 924-A plotter. The HDAPS system draws graticules based on a Universal Modified Transverse Mercator Projection. The three 8-1/2" x 11", 1:5,000-scale final field sheets are designated RA-5-1-90 and are appended to this report. Filed with the hydrographic data

Depth contours are drawn on the ~~final field~~ smooth sheets in accordance with the Hydrographic Manual and Hydrographic Survey Guideline 69.

All field sheets, accompanying field records, and this Descriptive Report will be forwarded to the Pacific Hydrographic Section (N/CG245) for office processing.

F. CONTROL STATIONS ✓

A listing of the geodetic stations used to control this survey is included in ~~Appendix V of~~ this report.

Positions for all existing stations are from the NGS data base and from horizontal control work conducted by RAINIER personnel during FE-298. All existing stations were recovered by comparing inverse distances to EDMI distances, in accordance with methods stated in Section 5.2.4 of the Field Procedures Manual. Geographic positions are based on the North American Datum of 1983 and the Geodetic Reference System 1980 Ellipsoid. Further information is included in the Sitka 1990 Horizontal Control Report for FE-344.

G. HYDROGRAPHIC POSITION CONTROL ✓

Soundings were located using Motorola Mini-Ranger Falcon 484 microwave, multi-range positioning equipment. Range-azimuth techniques were used to position eight dive detached positions (D.P.s) for AWOIS Item #50090. (Positions 2000-2007, Day 143-144)

Positioning Equipment ✓

The following tables summarize the mobile console/RT pairs and shore transponders used during this survey.

Mobile Equipment

EDP No.	Vessel	Console/RT	DN
2123	RA-3	D0051/B1405	143-144
2125	RA-5	F0245/F3414	143-144

Shore Equipment

Transponder Serial No.	Code	Transponder Serial No.	Code*
E2713	3	C1883	B/11
F3248	4	F3256	E/14
B1413	5		

* hexadecimal/numerical designations

Baseline Calibrations ✓

Baseline calibrations were conducted over water in accordance with FPM 3.1.3.2 on DN 058-061 on Lake Washington, Sand Point, WA, over a measured distance of 1423 meters. Detailed information, calibration data, and description of the baseline can be found in the Spring 1990 Electronic Control Data Package for OPR-O186-RA.

System Check Procedures ✓

Critical systems checks were conducted in Vesno 2125 in accordance with FPM 3.1.3.3. Printouts of HDAPS screen graphics displaying multiple lines of position confirm that the error circle radius and maximum residual did not exceed allowable rejection limits.

Fixed-point systems checks were conducted in Vesno 2123 in accordance with FPM 3.1.2.2. Two inverse distances were computed via MTEN and HDAPS: Station SKIT (100) to Japonski Harbor Entrance Light "6" and Station SKIT (100) to Japonski Harbor Daybeacon "5". The distances were measured via Code E/14 on Station SKIT (100). The light and daybeacon were used as fixed points. A comparison of the computed and measured distances showed excellent agreement to within 1.5 meters. Computation forms are included in the survey data. Filed with the hydrographic data.

Problems and Unusual Position Configurations ✓

All angle and distance measurements for range-azimuth positioning of the dive D.P.s were made from Station SKIT (100), initialing on Station ALEUT (101). A Wild T-2 Theodolite, S/N 320741, was used in conjunction with Code E/14 on Station SKIT (100). The dive D.P.s were manually logged and positions computed with HDAPS. All computation forms are included in the survey data. Filed with the hydrographic data

Null zones and erratic ranges were occasionally experienced due to the destructive interference of direct and reflected microwaves. Time-and-course interpolations were used during data processing to correct the position of soundings taken when launches approached null zones (as indicated by the launches' erratic steering needles and higher ECR and residual values). Did not appear on this survey

Antenna Offset Distances ✓

The antenna offset distance was 0.0 meters for both launches as each launch had its antenna located over the transducer.

H. SHORELINE See Evac Report, section 2

Not applicable.

I. CROSSLINES ✓

A total of 0.37 nautical miles of crosslines were run perpendicular to the mainscheme sounding lines, representing 8% of the mainscheme hydrography. Crossline soundings agree very well (within one meter) with mainscheme soundings. The agreement between soundings obtained by different echo sounders in a common area is also as stated above.

J. JUNCTIONS ✓

Not applicable.

K. COMPARISON WITH PRIOR SURVEYS See Evaluation Report, section 6

This survey was compared with prior surveys H-6353 (1:5,000), 1938, and H-6355 (1:10,000), 1938. In general, survey soundings agree within 2 meters except along the southwestern corner of the survey area where depths of 4-6 meters shoaler were found on the current survey. Survey FE-328 was also compared to, see Evaluation Report, section 6

L. COMPARISON WITH THE CHART See Evaluation Report Section 7

This survey was compared to NOS chart 17327, 18th edition, April 22/89, 1:10,000, with a 1:5,000 insert of Sitka Harbor.

Comparison of Sounding Features ✓

All charted soundings originate from the two prior surveys discussed in Section K with the exception of AWOIS Item 51736 discussed below.

Recommendation: The hydrographer recommends least depths and depth contours found during this survey be used to update the chart. Concur

AWOIS Items

This field examination involved the investigation of two AWOIS items.

AWOIS #50090: Determine the position and least depth of several 3'x3' concrete anchors and debris located in the charted foul area in the entrance to Sealing Cove Marina.

Investigation: During 1987, RAINIER conducted dive investigations and found several 3'x3' concrete blocks. Positions and least depths were not established at that time. The search area used for this field examination originated with the position plot of the 1987 survey.

The divers searched the area, in 10 feet of visibility, with a 35-meter jackstay and 40-meter circle search. They found seven 3'x3' concrete blocks and one boulder (DN 143, 144; Pos. Nos. 2000-2007) extending off the bottom approximately 2 feet along the southern limit of the search area. No other significant debris was found in the search area.

Recommendations: The hydrographer recommends the charted foul area be deleted Do not concur and the least depths of the concrete blocks and boulder be charted as shown on the ~~final field~~ Smooth sheet. Chart foul area with least depths on the obstructions. See Smooth Sheet

AWOIS #51736: A complete echo sounder investigation of an area extending SW-NE from 57°01'49.7"N, 135°18'23.4"W to 57°01'57.2"N, 135°17'54.9"W (NAD 83) and extending 100 meters on either side.

Investigation: Shoal depths of 9 fathoms at approximate position 57°01'56.1"N, 135°17'59.6"W, 14 fathoms at position 57°01'54.4"N, 135°18'06.2"W, and 11 fathoms at position 57°01'48.6"N, 135°18'18.9"W were reported by the M/V SEA PRINCESS. The above listed coordinates have been adjusted from NAD 27 to NAD 83.

The area was investigated with 10-meter line spacing over the entire area (DN 143, 144; Pos. Nos. 6000-6157). This sounding density was adequate to have a 100 percent bottom coverage with the low frequency beam in these depths. No indication of the shoal depths was found.

Recommendation: The two reported shoals that are charted (9 and 11 fathoms) should be deleted from the chart and soundings from survey FE-344 should be used to chart the area. Concur
Dangers to Navigation ✓

No dangers to navigation were found during this field examination.

M. ADEQUACY OF SURVEY ✓

This is a field examination of two AWOIS items and is complete and adequate to be used for charting purposes, and to supersede any historical data in the common area. concur

N. AIDS TO NAVIGATION ✓

During RAINIER's 1987 project all aids to navigation were positioned and this information was passed on to the U.S. Coast Guard. No further requests for positioning were received.

A chartlet showing submerged cables in the area was delivered to the ship by a local cable-laying contractor. The ship is trying to obtain additional background information on the source and this will be forwarded as soon as it is received. It is recommended that this information be used to update the chart. A chartlet showing this information is appended to this report.

O. STATISTICS ✓

Vessel:	2123	2125	Total
# of Pos.	8	~~166~~ 139	~~174~~ 147
NM Hydro	0	9.25	9.25

NM^2 Hydrography	0.05	Velocity Casts	1
Bottom Samples	0	Tide Stations	0
Detached Positions	8	Current/Magnetic Stations	0

P. MISCELLANEOUS ✓

None.

Q. RECOMMENDATIONS ✓

None.

R. AUTOMATED DATA PROCESSING ✓

Data acquisition and processing were accomplished with Hewlett-Packard (HP) 340M workstations and the following HDAPS programs:

Program Name	Version
SURVEY	4.13
SURVEY (PC-DAS)	3.55
POSTSUR	4.13
FILESYS	1.50
ABST	3.03
PLOTALL	1.30, 1.55
POINT	1.10
BACKUP	1.02
CONVERT	2.33
PRINTOUT	2.23
DIAGNOSTIC	2.15
INVERSE	1.01
INSTALL	1.20
CONPUTE	2.02
CONSTAT	2.02
CONPLOT	1.02
AUTOST (BIGAUTOST)	2.00

The survey data, stored according to sheet number, were forwarded to N/CG245 on 32-track tape cartridges.

S. REFERRAL TO REPORTS ✓

The following supplemental reports and data packages contain additional information relevant to this survey:

Title	Date Sent to N/CG245
Sitka 1990 Horizontal Control Report for FE-344	July, 1990
Spring 1990 Electronic Control Data Package for OPR-O186-RA	July, 1990
1990 Coast Pilot Report, OPR-O186-RA	July, 1990

Respectfully submitted,

Donald W. Haines
Lieutenant (j.g.), NOAA

Approved and forwarded,

John C. Albright
Captain, NOAA
Commanding Officer

CONTROL STATIONS

	Type	Latitude	Longitude	H	Cart	Freq	Vel	Code	MM/DD/YY
100	F	057:02:44.607	135:20:28.545	3	139	0.0	0.0	E	05/22/90
101	V	057:02:43.532	135:20:22.453	3	139	0.0	0.0		00/00/00
~~102~~	~~F~~	~~057:02:16.305~~	~~135:17:38.299~~	~~3~~	~~250~~	~~0.0~~	~~0.0~~	~~5~~	~~05/22/90~~
103	F	057:02:06.221	135:16:44.574	2	250	0.0	0.0		00/00/00
104	F	057:02:05.133	135:18:49.477	3	250	0.0	0.0	3	05/22/90
~~105~~	~~F~~	~~057:01:55.001~~	~~135:16:20.410~~	~~3~~	~~250~~	~~0.0~~	~~0.0~~		~~00/00/00~~
106	F	057:00:54.771	135:16:50.895	3	250	0.0	0.0		00/00/00
~~107~~	~~F~~	~~057:00:51.024~~	~~135:17:44.988~~	~~2~~	~~250~~	~~0.0~~	~~0.0~~	~~B~~	~~05/22/90~~
~~108~~	~~F~~	~~057:00:42.029~~	~~135:19:24.571~~	~~2~~	~~250~~	~~0.0~~	~~0.0~~		~~00/00/00~~
109	F	057:01:34.240	135:19:20.781	4	250	0.0	0.0	4	05/22/90
~~110~~	~~V~~	~~057:02:49.631~~	~~135:20:45.949~~	~~4~~	~~139~~	~~0.0~~	~~0.0~~		~~05/23/90~~

NO.	NAME
100	Skit, 1987
101	Aleut, 1938
103	Har, 1938
104	Twin, 1938
106	Off, 1938
109	Galan, 1938

ADVANCED COPY FAXED TO
DMA ON 7/2/90

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
OFFICE OF CHARTING AND GEODETIC SERVICES
ROCKVILLE, MARYLAND 20852

Pacific Hydrographic Section
BIN C15700, Bldg. 3
7600 Sand Point Way NE
Seattle, Washington 98115-0070

June 28, 1990

Commander (OAN)
Seventeenth Coast Guard District
P.O. Box 3-5000
Juneau, Alaska 99802-1217

Dear Sir:

During office review of hydrographic survey FE-344, Alaska, Sitka a danger to navigation affecting chart 17327 (18th ed., April 22, 1989: NAD 83) and chart 17326 (10th ed., February 9, 1980: NAD 27) was found.

It is recommended that the enclosed Report of Dangers to Navigation be included in the Local Notice to Mariners.

Questions concerning this report should be directed to the Pacific Hydrographic Section at (206) 526-6853.

Sincerely,

Pamela R. Chelgren-Koterba
Commander, NOAA
Chief, Pacific Hydrographic Section

Enclosure

cc: DMA/TC
N/CG221

REPORT OF DANGERS TO NAVIGATION

Hydrographic Survey Registry Number: FE-344
Survey Title: State: Alaska
General Locality : Sitka
Sublocality : Rocky Patch and Entrance to Sealing Cove Marina
Project Number: OPR-0186-RA, NOAA Ship RAINIER

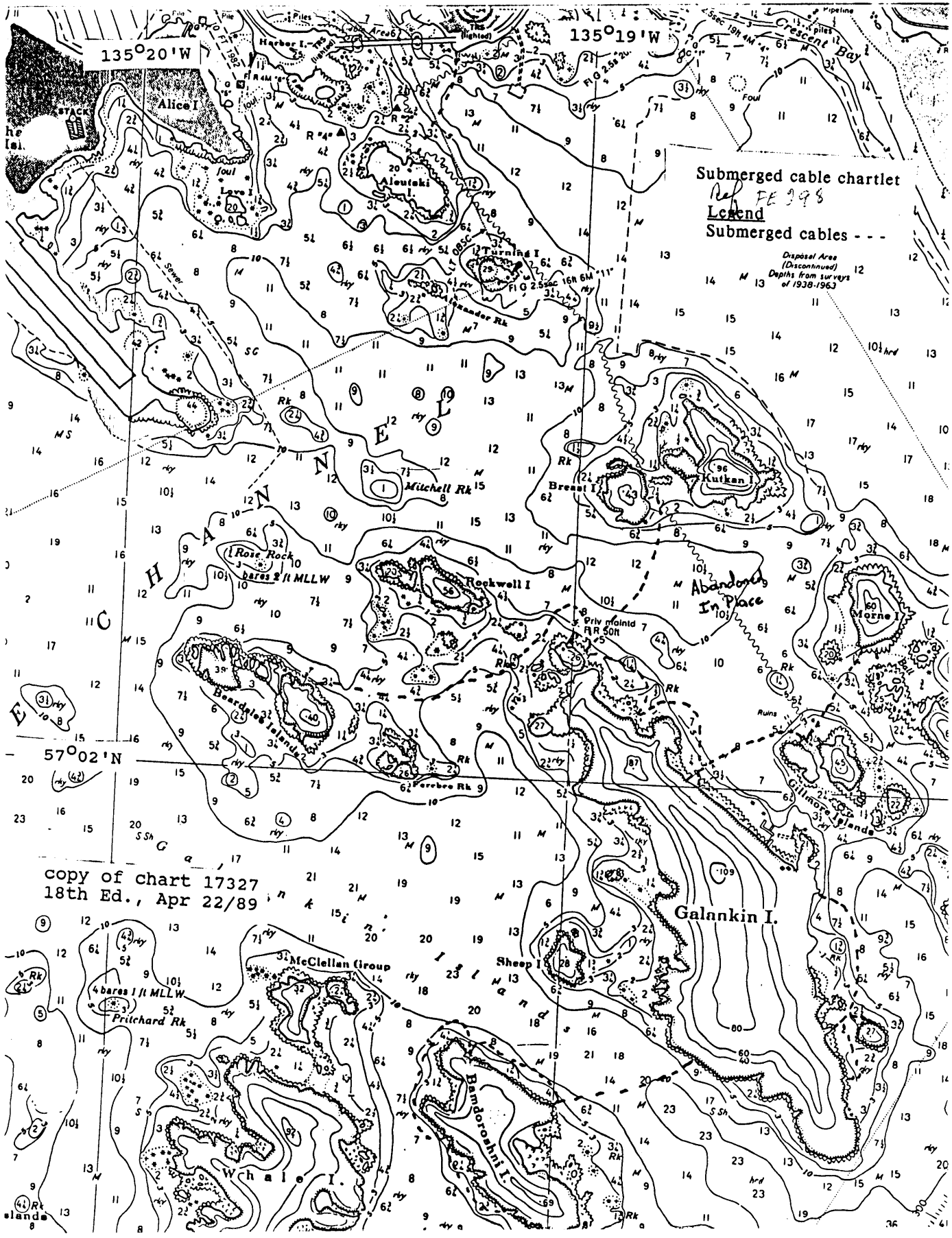
The following item was discovered during hydrographic survey FE-344.

Object Discovered: A foul area extends approximately 50 meters southwest from latitude 57° 02' 47.8"N, longitude 135° 20' 44.0"W, (NAD 83). The area is approximately 25 meters wide and contains scattered submerged concrete obstructions.

Affected nautical charts:

CHART NUMBER	EDITION NO.	EDITION DATE	FEATURE	CHART HORIZ. DATUM	GEOGRAPHIC POSITION LATITUDE(N)	GEOGRAPHIC POSITION LONGITUDE(W)
17327	18	4/22/89	Foul Area	NAD 83	57°02'47.8"	135°20'44.0"
17326	10	2/9/80	Foul Area	NAD 27	57°02'49.1"	135°20'37.6"

Questions concerning this report should be directed to the Pacific Hydrographic Section at (206) 526-6853.


135°20'W
135°19'W
57°02'N
Submerged cable chartlet
Ref FE 995
Legend
Submerged cables - - -
Disposal Area (Discontinued) Depths from surveys of 1938-1963
Abandoned In Place
copy of chart 17327
18th Ed., Apr 22/89
Alice I
Aleutski I.
Turning I
Mitchell Rk
Rose Rock
bares 2 ft MLLW
Rockwell I
Kutkan I
Morne I
Beardsley Islands
Forebee Rk
Gillmore Islands
Galankin I.
McClellan Group
Pritchard Rk
4 bares 1 ft MLLW
Sheep I
Bamdoroshni I.
Whale I.
CHANNEL
Crescent Bay
Harbor I.

APPROVAL SHEET

Descriptive Report to Accompany

Field Examination

RA-5-1-90

FE-344

Standard procedures were followed in accordance with the Hydrographic Manual, Fourth Edition; the Hydrographic Survey Guidelines; and the Field Procedures Manual in producing this survey. The data were examined daily during data acquisition and processing.

The field sheet and accompanying records have been examined by me, are considered complete and adequate for charting purposes, and are approved.

John C. Albright
Captain, NOAA
Commanding Officer

ORIGINAL

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE: September 14, 1990

MARINE CENTER: Pacific

OPR: 0186-RA

HYDROGRAPHIC SHEET: FE-344

LOCALITY: Rocky Patch and Entrance to Sailing Cove Marina, AK.

TIME PERIOD: May 23 - 24, 1990

TIDE STATION USED: Sitka, AK. (945 1600)

PLANE OF REFERENCE (MEAN LOWER LOW WATER): = 4.72 ft.

HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: = 9.1 ft.

REMARKS: RECOMMENDED ZONING
Zone direct

James R. Hubbard

CHIEF, TIDAL DATUM QUALITY
ASSURANCE SECTION

NOAA FORM 76-155
(11-72)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

GEOGRAPHIC NAMES

SURVEY NUMBER

FE-344

Name on Survey	A ON CHART NO. 17327	B ON PREVIOUS SURVEY NO. FE-298	C ON U.S. QUADRANGLE MAPS	D FROM LOCAL INFORMATION	E Chart 17326	F P.O. GUIDE OR MAP	G RAND MCNALLY ATLAS	H U.S. LIGHT LIST	K	
ALASKA (title)	X									1
ALICE ISLAND	X	X								2
ROCKY PATCH	X				X					3
* SEALING COVE (title)		X								4
SITKA (title)		X			X					5
										6
* Name approved but not yet charted										7
										8
										9
										10
										11
										12
										13
				Approved:						14
				Charles E. Harrington						15
										16
				Chief Geographer - NOS						17
				OCT 22 1990						18
										19
										20
										21
										22
										23
										24
										25

NOAA FORM 76-155 SUPERSEDES C&GS 197

NOAA FORM 77-27(H) (9-83) | U.S. DEPARTMENT OF COMMERCE | REGISTRY NUMBER

HYDROGRAPHIC SURVEY STATISTICS

FE-344

RECORDS ACCOMPANYING SURVEY: To be completed when survey is processed.

RECORD DESCRIPTION	AMOUNT	RECORD DESCRIPTION	AMOUNT
SMOOTH SHEET	2	SMOOTH OVERLAYS: POS., ARC, EXCESS	3
DESCRIPTIVE REPORT	1	FIELD SHEETS AND OTHER OVERLAYS	3

DESCRIPTION	DEPTH/POS RECORDS	HORIZ. CONT. RECORDS	SONAR-GRAMS	PRINTOUTS	ABSTRACTS/ SOURCE DOCUMENTS	
ACCORDION FILES	1					
ENVELOPES						
VOLUMES						
CAHIERS						
BOXES						

SHORELINE DATA

SHORELINE MAPS (List):

PHOTOBATHYMETRIC MAPS (List):

NOTES TO THE HYDROGRAPHER (List):

SPECIAL REPORTS (List):

NAUTICAL CHARTS (List):

OFFICE PROCESSING ACTIVITIES

The following statistics will be submitted with the cartographer's report on the survey

PROCESSING ACTIVITY	AMOUNTS		
	VERIFICATION	*EVALUATION*	*TOTALS*
POSITIONS ON SHEET			139
OSITIONS REVISED			
SOUNDINGS REVISED			
CONTROL STATIONS REVISED			
	TIME-HOURS		
	VERIFICATION	*EVALUATION*	*TOTALS*
PRE-PROCESSING EXAMINATION			
VERIFICATION OF CONTROL			
VERIFICATION OF POSITIONS	27		27
VERIFICATION OF SOUNDINGS	77		77
VERIFICATION OF JUNCTIONS			
APPLICATION OF PHOTOBATHYMETRY			
SHORELINE APPLICATION/VERIFICATION			
COMPILATION OF SMOOTH SHEET	29		29
COMPARISON WITH PRIOR SURVEYS AND CHARTS		9	9
EVALUATION OF SIDE SCAN SONAR RECORDS			
EVALUATION OF WIRE DRAGS AND SWEEPS			
EVALUATION REPORT		13	13
GEOGRAPHIC NAMES			
OTHER*			
*USE OTHER SIDE OF FORM FOR REMARKS TOTALS	133	22	

Pre-processing Examination by M. Brown	*Beginning Date* 6-20-90	*Ending Date* 7-3-90
Verification of Field Data by E. Brown	*Time (Hours)* 133	*Ending Date* 12-7-90
Verification Check by J. Stringham, B. Olmstead	*Time (Hours)* 20	*Ending Date* 12-14-90
Evaluation and Analysis by C. R. Davies	*Time (Hours)* 22	*Ending Date* 12-17-90
Inspection by D. Hill	*Time (Hours)* 2	*Ending Date* 1-22-91

EVALUATION REPORT
FE-344

1. INTRODUCTION

Survey FE-344 is a field examination accomplished by the NOAA Ship RAINIER in accordance with Project Instructions OPR-0186-RA, dated February 22, 1990.

This survey occurred in Alaska and covers an area just north of an area named Rocky Patch and a foul area near the entrance to Sealing Cove Marina. The field examination was conducted to determine the positions of several submerged obstructions found on survey FE-298 (AWOIS 50090) and three shoal depths reported by the M/V Princess in 1987, (AWOIS 51736). The surveyed area covering AWOIS 51736 extends from latitude 57°01'45"N, longitude 135°18'18"W, northeast to latitude 57°02'02"N, longitude 135°17'54"W. The investigation of AWOIS 50090 is centered at latitude 57°02'47"N and longitude 135°20'45"W. The bottom consists of mud. Depths gathered during this survey range from 18.9 to 55 meters near Rocky Patch and between 1.3 to 5.2 meters near Sealing Cove.

Predicted tides for Sitka, Alaska were used for the reduction of soundings during field processing. Approved hourly heights zoned from Sitka, Alaska, gage 945-1600, were used during office processing.

The field sheet parameters have been revised to center the hydrography on the smooth sheet and to change the projection to polyconic. The TRA and sound velocity correctors are adequate. An accompanying computer printout contains the parameters and the correctors. The electronic control correctors have been determined according to the established procedures and are adequate.

A digital file has been generated for this survey as required by the specifications contained in Hydrographic Survey Guideline No. 52 Standard Digital Data Exchange Format, April 15, 1986. The file, however, is incomplete. Certain feature descriptive information, all line type data and miscellaneous isolated features are not in the digital record due to the present lack of digitizing resources. The user should refer to the smooth sheet for complete depiction of survey data.

2. CONTROL AND SHORELINE

Sections F and G of the hydrographer's report and the Horizontal and Electronic Control Reports for OPR-0186-RA, 1990 contain adequate discussions of horizontal control and hydrographic positioning.

Positions of horizontal control stations used during hydrography are 1987 field and published values based on NAD 83. These values were used during office processing. The smooth sheet and accompanying overlays are annotated with NAD 27 adjustment ticks based on values determined by N/CG121. Geographic positions based on NAD 27 may be plotted on the smooth sheet utilizing the NAD 83 projection by applying the following corrections.

Latitude: -1.306 seconds (-40.4 meters)
Longitude: 6.358 seconds (107.2 meters)

The year of establishment of control stations originates with the hydrographer's signal list and is listed in the smooth printout accompanying this survey.

There are no shoreline maps applicable to this survey. Shoreline depicted on the smooth sheet originates with chart 17327, 18th edition, April 22, 1989 and is to be used for orientation only.

3. HYDROGRAPHY

Hydrography is adequate to:

a. delineate the bottom configuration, determine least depths, and draw the standard depth curves;

b. reveal there are no significant discrepancies or anomalies requiring further investigation; and

c. show the survey was properly controlled and soundings are correctly plotted.

4. CONDITION OF SURVEY

The hydrographic records and reports received for processing are adequate and conform to the requirements of the Hydrographic Manual, 4th Edition, revised through CHANGE NO. 3, the Hydrographic Survey Guidelines, and the 1989 edition of the Field Procedures Manual.

5. JUNCTIONS

Survey FE-344 does not junction any contemporary surveys.

6. COMPARISON WITH PRIOR SURVEYS

H-6353(1938) 1:5,000
H-6355(1938) 1:10,000

Surveys H-6353 and H-6355 cover the common area near Rocky Patch. Depths from the present survey are generally 1/2 to 1 meter shoaler.

FE-298 (1987) 1:5,000

Survey FE-298 covers the entire foul area (AWOIS 50090) on the present survey. The submerged obstructions were found within the prior survey foul limits. For further discussion by the hydrographer, see section L of the Descriptive Report.

Survey FE-344 is adequate to supersede the prior surveys within the common area.

7. COMPARISON WITH CHART

Chart 17327, 18th edition, dated April 22, 1989; scale 1:10,000

a. Hydrography

All charted hydrography originates with surveys H-6353, H-6355, FE-298 and miscellaneous sources.

Survey FE-344 is adequate to supersede charted hydrography within the common area.

b. AWOIS

AWOIS item 51736 originates with a miscellaneous source. The disposition of the item is adequately discussed by the hydrographer in section L.

c. Controlling Depths

There are no charted channels with controlling depths within the area of this survey.

d. Aids to Navigation

There are no fixed or floating aids located within the area of this survey.

e. Geographic Names

Names appearing on the smooth sheet and in the survey title have been approved by the Chief Geographer.

f. Dangers to Navigation

No reports of dangers to navigation were generated during the survey. One danger was found during office processing and was reported to the USCG and DMA; the report is attached to this report.

8. COMPLIANCE WITH INSTRUCTIONS

Survey FE-344 adequately complies with the Project Instructions.

9. ADDITIONAL FIELD WORK

This is a good hydrographic survey. No additional field work is recommended.

Charles R. Davies

C. R. Davies
Cartographer

APPROVAL SHEET
FE-344

Initial Approvals:

The completed survey has been inspected with regard to survey coverage, delineation of the depth curves, development of critical depths, cartographic symbolization, comparison with prior surveys and verification or disproval of charted data. The digital data have been completed and all revisions and processing have been entered in the magnetic tape record for this survey. Final control, position, and sounding printouts have been made and are included with the survey records. The survey records and digital data comply with NOS requirements except where noted in the Evaluation Report.

Dennis Hill Date: 1-22-91

Dennis J. Hill
Chief, Hydrographic Processing Unit
Pacific Hydrographic Section

I have reviewed the smooth sheet, accompanying data, and reports. This survey and accompanying digital data meet or exceed NOS requirements and standards for products in support of nautical charting except where noted in the Evaluation Report.

Date: 1/22/91

Commander Pamela Chelgren-Koterba, NOAA
Chief, Pacific Hydrographic Section

****

Final Approval

Approved: J. Austin Yeager Date: 2/15/91

J. Austin Yeager
Rear Admiral, NOAA
Director, Charting and Geodetic Services

135° 18' 15" 135° 18' 00" 135° 17' 45"

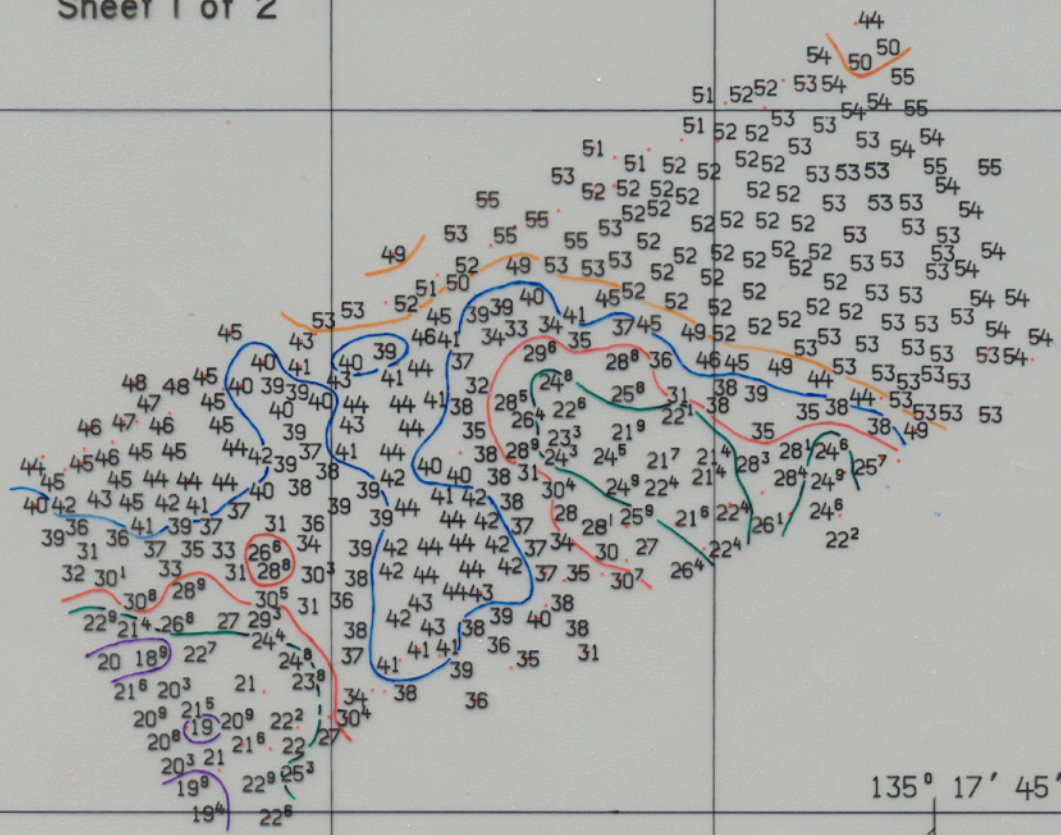
57° 02' 15"

FE-344

ALASKA, SITKA
ROCKY PATCH AND ENTRANCE TO SEALING COVE

Date of Survey: May 1990
Scale: 1:5000
Soundings in METERS and DECIMETERS at MLLW
Datum: NAD 83
AWOIS Item: 51736
Sheet 1 of 2

57° 02' 00"



135° 17' 45" 57° 01' 45"

57° 01' 45"

NAD 27

ROCKY PATCH

12/13/90 B.H.B.

135° 18' 30" 135° 18' 15" 135° 18' 00" 135° 17' 45"

135° 21' 00" 135° 20' 45" 135° 20' 30"

TIDE STATION

135° 20' 30" 57° 03' 00"

57° 03' 00"

NAD 27

11/08/90 B.H.B.

SEALING COVE

57° 02' 45"

100

SKIT, 1987

101

ALEUT, 1938

FE-344

ALASKA, SITKA
ROCKY PATCH AND ENTRANCE TO SEALING COVE

Date of Survey: May 1990

Scale: 1:5000

Soundings in METERS and DECIMETERS at MLLW

Datum: NAD 83

AWOIS Item: 50090

Sheet 2 of 2

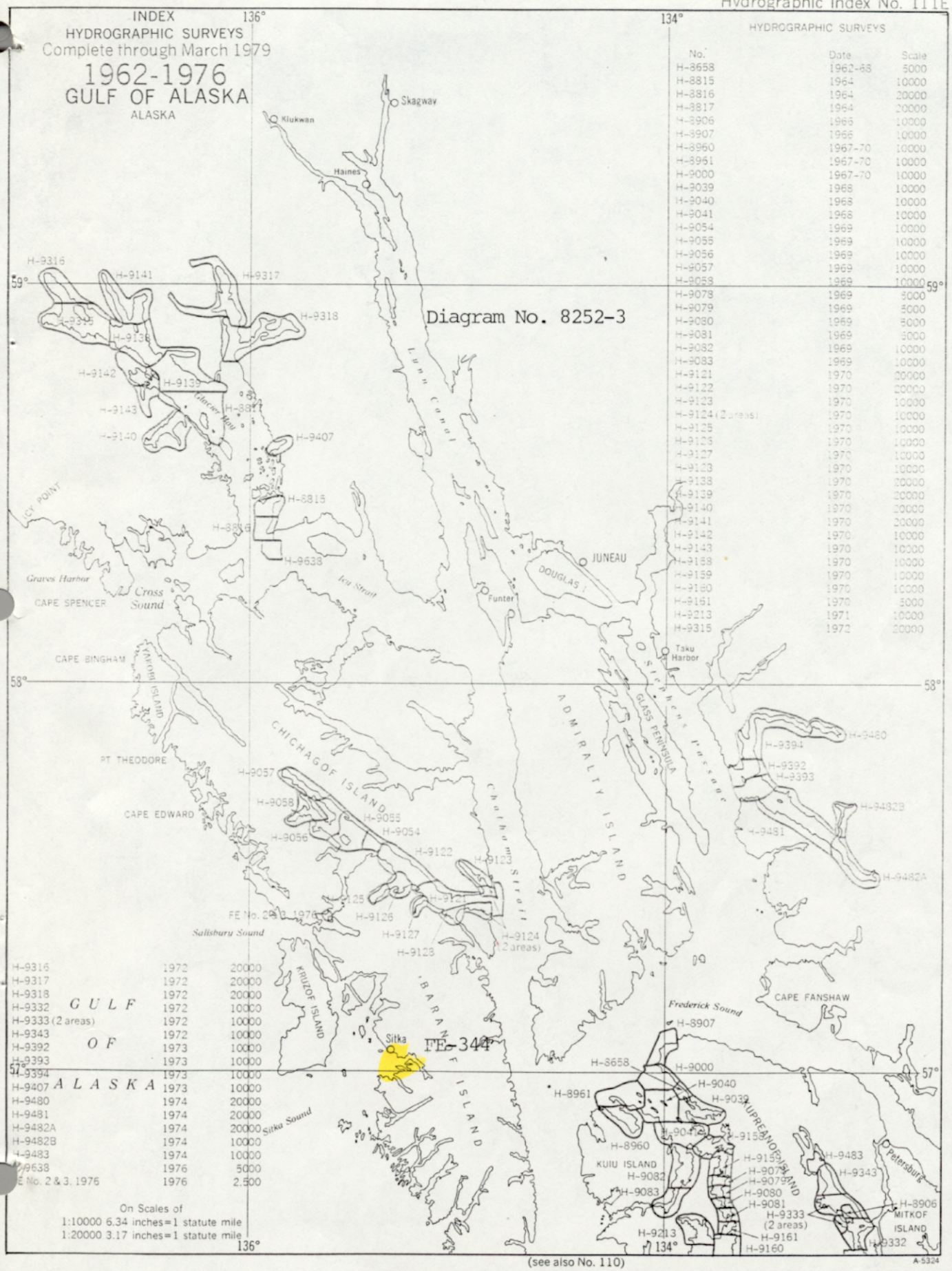
57° 02' 30"

Shoreline in brown for orientation only:
Chart 17327, 18th Edition

135° 21' 00" 135° 20' 45" 135° 20' 30"

DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Ocean Survey
Washington, D.C.

Hydrographic Index No. 111E



(see also No. 110)

A-5324

NOAA FORM 75-96
(10-83)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

MARINE CHART BRANCH

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. FE-344

INSTRUCTIONS

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.
1. Letter all information.
2. In "Remarks" column cross out words that do not apply.
3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

CHART	DATE	CARTOGRAPHER	REMARKS
17327	12/11/90	Charles R. Davis	Full ~~Part~~ ~~Before~~ After Marine Center Approval Signed Via full application of Sndgs
			Drawing No. @ 57°01'54"N., 135°18'12"W. and two Sndgs on Obstn.
			½ and 2¾ fms @ 57°02'47"N., 135°20'45"W.
17326	12/11/90	Charles R. Davis	Full ~~Part~~ ~~Before~~ After Marine Center Approval Signed Via full application of Sndgs
			Drawing No. thru 17327 @ 57°01'54"N., 135°18'12"W. and
			foul limits @ 57°02'46"N., 135°20'45"W.
17324	12/11/90	Charles R. Davis	Full ~~Part~~ ~~Before~~ After Marine Center Approval Signed Via full application thru 17327
			Drawing No. and 17326 applied foul limit only at
			57°02'46"N., 135°20'46"W.
17320	12/12/90	Charles R. Davis	Full ~~Part~~ ~~Before~~ After Marine Center Approval Signed Via
			Drawing No. one critical Sndg applied @ 57°02'02"N.,
			135°17'53"W. (24 fms).
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.

This FE-344 was fully applied to AMC's 17327 prior to compilation. FBP 9/11/92 (See next page) The H-Drawings were not used.

SUPERSEDES C&GS FORM 8352 WHICH MAY BE USED

NOAA FORM 75-96
(10-83)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

MARINE CHART BRANCH

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. FE-344

INSTRUCTIONS

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.
1. Letter all information.
2. In "Remarks" column cross out words that do not apply.
3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

CHART	DATE	CARTOGRAPHER	REMARKS
17327	9/4/91	Eric Johnston	(Full) Part Before After Marine Center Approval Signed Via
			Drawing No. 17
17326	9-11-92	Kenny O'Dell	(Full) Part Before After Marine Center Approval Signed Via
			Drawing No. 17
17324	9-11-92	Kenny O'Dell	(Full) Part Before After Marine Center Approval Signed Via
			Drawing No. 14
17320	9-11-92	Kenny O'Dell	(Full) Part Before After Marine Center Approval Signed Via
			Drawing No. 25 (NO CORRECTION AT THIS SCALE)
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.

SUPERSEDES C&GS FORM 8352 WHICH MAY BE USED.